Notes of meeting of Pallid Sturgeon/Fish and Wildlife Technical Working Group

Use and Meaning of the Meeting Notes: Plenary and Technical Working Group meeting notes are intended to be a general summary of key issues raised and discussed by participants at meetings. The presentation of issues or items discussed is not designed to be totally comprehensive, or reflect the breadth or depth of discussions. However, it is intended to record the gist of conversations and conclusions.

Where a consensus or other agreement was reached, it will be so noted. Where ideas are comments are from only one or several participants, or where a brainstormed list is presented the content of which was not agreed to by all group members, the recorders will to the best of their abilities note these qualifiers. When participants raise comments about the meeting notes, or make other suggestions or comments following meetings which are more than "corrections," we will add these in a section at the end of the meeting notes captioned "Post Script".

Tuesday afternoon, June 28, 2005

Bismarck, ND

1. Reporters:

Pat, Jane and Steve volunteered to report back to the Plenary

2. Agenda:

It was agreed to focus initially on reaching agreement on providing advice to the Plenary Group regarding the Spring Rise regime.

Once this is completed the Group will focus on questions of hypotheses and monitoring.

3. Discussion of Recommendation to Plenary

The Group's recommendation should be within the bounds of the BiOp of 2003. Instead of this, the Group should "stick its neck out" and push for a recommendation that more deliberately aims to support the recovery of the Pallid Sturgeon (PS).

Since we know so little about the PS, we should approach the Spring Rise (SR) as an opportunity to increase our knowledge, so as to help the PS in the future. We should not pretend to be able to develop recommendations to help the PS now.

Accordingly, consider whether to recommend unimodal or bimodal SRs. Unimodal is more interesting as a biological experiment, but may not support the PS so well.

4. Alternative models considered:

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4.1. <u>BiOp 2003</u>

Set up a full range of study designs with a range of SR alternatives, and implement as water is available. Design for Adaptive Management, so that plans will be revised based on alternatives.

How can we do better than the SR of 2005?

4.2. "Jacobsen" Option

Recommend SR duration, frequency and rate of change following historic data, and which improves on BiOp 2003

4.3. Propose a hydrograph

What features do we want to see? What if circumstances prevent us from following the criteria that we recommend? Provide the best that circumstances permit.

4.4. Propose quantities of key parameters (like the BiOp)

Add to the BiOp specific features, e.g. dates of peak so we can evaluate it. (Constituents may prefer this.)

4.5. Recommendation focused on historic data

Recommend 10, 25, 50, 75, 90 % percentile of each variable according to Rob's list, and ask CEO to work it out so that management approximates the amount of flow (e.g. in a dry your go to 10 or 25 percentile).

But this doesn't reflect the biology of the PS

4.6. Recommendation with Biological Focus

Graph shows "Wild Guess" of discharge (max 41-60 kcfs), and temp. range of 15-22 C. SR begins May 1, and ends June 15.

But don't specify the calendar date: this is a moving target.

4.7. Summary of alternatives:

"Default model"

"Ouasi-natural"

"Biologists view of the World"

5. Unimodal / Bimodal

Unimodal would be favored by water users

Should it be: two peaks, only the first rise, or only the second rise?

Just ask for the medians.

6. Agreed recommendation:

Bimodal with peaks (not plateaux)

Represented by Rob's medians depending on available flow

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Management factors ranked in order of importance:

ONE: Discharge (for 1st and 2nd SR)

TWO: Dates of peaks (as temperature data becomes available, give precedence to temperature/days over calendar dates)

THREE: Duration

FOUR: Rates of rise and fall

7. Next Steps

Meeting on July 20-21: overwhelming majority prefers to meet in Omaha rather than Denver.

8. Tomorrow's meeting (Wednesday a.m.):

- We'll focus on what monitoring exists,
- The hypotheses
- What monitoring should be developed for a full suite of scientific data?
- Add to Craig's list
- Add research projects

9. E-mail list:

This is incomplete or not-functioning: Each will report failures of system to CDR so it can be remedied

Wednesday morning, June 29, 2005

Bismarck, ND

10. Agreed recommendation reconsidered:

Bimodal with peaks (not plateaux)

Represented by Rob's medians (see ROR-EBQ2) depending on available flow Management factors ranked (for Normal Year 25th-75th %ile):

ONE: Timing: using Julian day but reverting to temperature when data is available

TWO: Peak: expressed in kcfs

THREE: Duration of Event: expressed in days FOUR: Rate of fall: expressed in kcfs per day FIVE: Rate of rise: expressed in kcfs per day

Notes on ranking:

- This is for a Normal year (25th 75th percentile)
- Ranking of management factors for Dry years and for Wet years is the same as for Normal years (for now).
- Ranking of management factors are the same for the first and second rises.
- The number of events is more important than the quality of the peak.
- A start to the Rise that is too early will be worse than a start that is late.
- We are mimicking the stimulus/response model.
- We also need to articulate the biological requirements of summer flows.

11. Other discussions:

- 11.1. Consider engaging tributary flows (but diluting turbid inflow from tribs with clear water from Gavins Point may be a problem).
- 11.2. Spawning availability under different flows?
- 11.3. The tech group needs late summer flows to be assessed.
- 11.4. We're focusing on spawning now we will learn about recruitment later.

12. To Be Discussed Later

Dropping flows arbitrarily immediately before the Rise is not acceptable, except for ...

13. Next Steps: Conference Calls

- 13.1. Communication: Craig has conference call line for group to use
- 13.2. Principal purpose of next conference calls: Ranking hypotheses

14. Schedule:

- 14.1. Thursday, June 30: CDR will e-mail to each group member a copy of Gerald Mestl's list of Hypotheses. Almost all members already have this document. This e-mail will serve to ensure that all have a copy.
- 14.2. Friday, July 1: before close of business, each group member will send Gerald a ranking of their Top Ten hypotheses. gmestl@ngpc.state.ne.us We will rank the hypotheses based on this year's situation according to which are most important to spawning and recruitment. On the teleconference we will further refine the list be discussing what is possible.
- 14.3. Tuesday, July 5: Gerald will compile a list of these rankings and will distribute them to the group members.
- 14.4. Thursday, July 7, 2 p.m. Central Time: First conference call.
- 14.5. Wednesday, July 13, 2 p.m. Central Time: Second conference call.